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ABSTRACT

The purpose of this study was to identify those factors which predict success in reading in the seventh year of school for children from a low socioeconomic level. Tests measuring reading readiness factors in kindergarten and reading achievement at the end of first grade were used as predictor variables, while a test of reading achievement at the end of the seventh year of school was used as the criterion variable. The three dependent variables considered during the seventh year of school were scores on the Metropolitan Achievement Test (MAT) in word knowledge, reading comprehension, and total reading. Analysis of data showed the following best predictors of success in the seventh year of school: for word knowledge, the simple correlation of the score in word discrimination on the MAT at the end of first grade; for reading comprehension, scores in word knowledge on the first-grade MAT; and for total reading, the score in word discrimination on the MAT in first grade. (JM)

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A Longitudinal Study of Factors Which Are Predictive of Reading Success of Low Socio-Economic Children in the Seventh Year of School

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The purpose of this study was to identify those factors which are predictive of success in reading in the seventh year of school for children from a low socio-economic level. Included in this study is the determination of the relationship between certain readiness factors measured at the kindergarten and early first grade levels and achievement in reading from low socio-economic level children at the beginning of the seventh year of school.

This study is an extension of a study conducted by McClellan in her doctoral dissertation in 1968 in which factors predictive of reading success were made of low socio-economic children in selected first grades. That investigation included an analysis of test scores of children who participated in a federally funded compensatory pre-primary education program officially entitled COPE in 1965-66 and who

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attended the first grade in Hillsborough County, Florida, in 1966-67, and were administered the Metropolitan Achievement Test, Primary Battery I, in May, 1967. In that study, readiness test scores were correlated with reading achievement test scores to determine which factors were better predictors of success in first grade reading. The same children and test scores were utilized to predict reading success of these children at the beginning of the seventh year of school.

There were 422 children in the original population of the COPE program. Reading achievement test scores were obtained on 230 of these children at the end of the first grade.

McClellan also studied the relationship of the readiness test scores with achievement test scores for the COPE children and a matched sample of 275 children from a population of the 1154 children from a non-COPE group. This report included only the COPE group. Other phases of extensive studies of both the COPE and non-COPE group concerning both reading and mathematics achievement are presently being investigated and will be reviewed in later reports.

Major objectives of this earlier experimental program were specifically designed to bring about increased school readiness by helping each child develop self-esteem, language skills, and motivation for school success. The curriculum was developed to improve the speech, develop the vocabulary, and increase the listening skills of the children.

Instruments Used

This study involved the use of tests to measure the reading readiness factors as well as achievement tests at the end of the first grade which were used as predictor variables and a test of reading achievement

at the end of the seventh year of school which was used as the criterion variable.

The predictor variables used were scores obtained on the Metropolitan Readiness Test (MRT), Form A, the Peabody Picture Vocabulary Test, A, the Goodenough-Harris Drawing Test, the Metropolitan Readiness Test, Form R, and the Metropolitan Achievement Test (MAT), Primary Battery I. The Metropolitan Readiness Test, Form R, was administered at the beginning of the first grade and the Metropolitan Achievement Test was administered during the kindergarten year. Scores on the Metropolitan Achievement Test, Advanced Battery, Form G, given at the beginning of the seventh year of school were used as the dependent variables. Test scores were obtained on a total of 282 children which was sixty-seven per cent of the original population. Of this number, fifty-six had been retained one year in school. Scores on the Metropolitan Achievement Test, Intermediate Battery, were obtained on these fifty-six children and the scores were converted to seventh grade test scores according to the procedure outlined in the Teacher's Handbook for the Metropolitan Tests.

The data were subjected to a stepwise analysis of multiple regression in order that the predictor variables most highly correlated with the criterion variable and having low intercorrelations could be selected for use in a multiple regression equation.

One variable at a time was entered into the regression equation, the potential variance reduction was considered for all the remaining variables, and that variable which reduced the variance the most was selected. Those variables were eliminated which were no longer significant.

As a result, only significant variables were selected to be used in the regression equations which are designed to predict word knowledge, reading comprehension, and total reading score.

Analysis of Results

The three dependent variables which were considered during the seventh year of school were scores on the Metropolitan Achievement Test in Word Knowledge, Reading Comprehension, and Total Reading.

The first dependent variable considered was Word Knowledge. The simple correlation between the score in Word Discrimination on the Metropolitan Achievement Test administered in May of the first grade was the best single predictor of success in Word Knowledge as determined on the Metropolitan Achievement Test during the seventh year of school. That correlation was .61. This value was increased to .65 when the Goodenough Draw-A-Woman Test was entered into the regression. It was further increased to .67 when the first grade test score in Word Knowledge from the MAT was entered, to .69 when the Number score of the February administration of the Metropolitan Readiness Test (MRT) was entered, and to .70 when the Total Score on that test was entered.

McClellan found that the best predictors of Word Knowledge achievement for first grade children was the first grade readiness Total Score in combination with the Copying score on a kindergarten readiness test.

The second dependent variable considered was Reading Comprehension. The single best predictor of success in Reading Comprehension in the seventh year was scores obtained in Word Knowledge on the MAT in the first grade with a simple correlation of .42. Other independent variables considered as best predictors which increased the correlation

eventually to .49 were, in order of importance, the Listening score on the February administration of the Metropolitan Readiness Test, the Total score on the July administration of the MRT, the Alphabet score, the Total score, and the Copying score on the February administration of the MRT.

McClellan found that a comparable dependent variable, Word Discrimination achievement, is best predicted by the Total score on the first grade readiness test in combination with the Alphabet score from the July readiness test.

The third dependent variable considered was the Total Reading score. The best single predictor for Total Reading was the score in Word Discrimination obtained on the MAT in first grade with a simple correlation of .48. This correlation was further increased to .59 by addition in the step-wise regression analysis of the following independent variables in the order given: the Number score on the February MRT, the Reading score on the first grade MRT, the Peabody Picture Vocabulary Test administered in early kindergarten, the Goodenough-Harris Draw-A-Woman Test given in kindergarten, the Matching score on the MRT given in February of the kindergarten year, the Reading test score from the MRT given in September of the first grade, and the Total score from the September MRT.

The total scores on the first grade and July readiness test combined with the scores on the Draw-A-Woman Test gave the best prediction of reading achievement by McClellan in her study.

Pikulski found the correlation between Metropolitan Total scores and Word Recognition was .67 at the end of sixth grade for the Language Arts group. For the Basal Reader group, comparable correlations were

.50 and .44. He contends that the predictive efficiency of the various readiness measures depends upon the instructional method employed.

There is a dearth of knowledge of long term predictability of reading achievement of school children. More longitudinal studies need to be conducted showing the various associations between early elementary achievement test scores and achievement measures in later years.

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